OBJECTIVES: At the most European countries the cost for assisted reproductive technology (ART) are compensated from state and insurance funds. At the first in Ukraine state funding of ART was launched on the Orders of MoH №579 from 24.11.2004. However, most patients have to pay own out-of-pocket costs for ART. **METHODS:** We evaluated the general cost of short and long stimulation protocols for ART of new Order of MOH Ukraine №271 from 23.12.2008 "On Approval of Instruction on the use of assisted reproductive technologies". Cost analysis for short and long protocols, based on the comparison of costs during 2014 and 2015 in Ukraine. **RESULTS:** We used the prices from database Morion (Kiyv) on 01.04.2015 and analysed the cost for short protocol. The stimulation of superovulation with Puregon was 18000 UAH (1Euro=24.7 UAH) or with Elonva was 13 000 UAH. Also cost on other medicines were included. In average, a general cost per 1 cycle was 16 600 UAH. Were analyzed the cost of ART long protocol. We included the cost with Diferelin depot that was 2800 UAH. The cost of stimulation of superovulation with Puregon was 18000 UAH. In average, a general cost per 1 cycle was 24 000 UAH. We compared the cost data on ART during 2014-2015. The average salary was 3998 UAH on 01.04.2015 in Ukraine. **CONCLUSIONS:** Comparing data 2014 and 2015 were founded, that the cost of short protocol increased by 27% and by 41% the long one. It was established that the cost of ART are high. Revealed that the cost of ART is 4-6 times higher than the average salary, therefore the availability of ART for families is low. It is necessary to determine the budget financing for ART to improve access to ART in Ukraine.

PIH15

ANALYSIS OF PREECLAMPSIA PREVENTION IN REAL PRACTICE AND THE NEED TO IMPROVE INFORMATION SUPPORT OF DOCTORS IN UKRAINE

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OBJECTIVES: Preeclampsia has a high prevalence rate and it's the second leading cause of maternal mortality. In developing countries a preeclampsia is the cause of 50 000 deaths each year. An effective method of preeclampsia prevention in accordance with WHO guidelines, is a prescription of antiplatelet drugs. **METHODS:** Analysis of consumed drugs for pregnant women, according to the real practice of the district hospital in Lviv region during 2014. Systematization of evidence data about the effectiveness of prevention and treatment of preeclampsia, which were published in the databases Cochrane, Pubmed, ClinicalTrials.gov **RESULTS:** The analysis of 112 medical records pregnant inpatients, who were hospitalized in September-December 2014, were conducted. For 42 (38%) patients were diagnosed the preeclampsia. For treatment intended antiplatelet drugs for 17 patients that only 40% were taking effective treatment. Other patients received various vitamins and antioxidants that have not confirmed evidence-effectiveness. The analysis of databases showed that recent RCTs (2013) indicate that antiplatelet therapy reduced the risk of pre-eclampsia by 21%. In randomize studies found that reduced level of neonatal mortality on 16% and the frequency of children born with low birth weight on 8%. In Ukraine, were registered 23 trade names of aspirin, including 11 from ukranian manufacturers. We calculated the costs of prevention during 5 months per patient (1 USD=22,3 UAH on 30.05.2015). Costs ranged from 3,10 USD to 15,5 USD. The best choice of affordable was aspirin in 75 mg with total costs 4,67 USD. **CONCLUSIONS:** We established that treatment with low doses of aspirin 75 mg / day in early pregnancy for women with high risk of preeclampsia is an effective prevention of preeclampsia. In Ukraine the patients have to pay out of pocket , than the necessary information support of doctors in hospitals on effective and affordable prevention of preeclampsia by antiplatelet schemes.

PIH16

COST-EFFICIENCY OF OF NATIONAL DRUG INFORMATION CENTER THROUGH MINISTRY OF HEALH HOTLINE CALLING SERVICES (937) IN SAUDI ARABIA: APPLICATION OF A MERCIAN MODEL

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OBJECTIVES: National Drug Information Center (NDIC) has started providing services since January 2013; and answering public and professional inquires through MOH-Hotline Calling Services (937) since December 2013. The objective of this study was to estimate cost-efficiency of NDIC in Saudi Arabia using American model of drug information inquires cost avoidance. **METHODS:** Simulation including all 12-month 2014 of receiving adults and pediatrics drug information inquiries through MOH-Hotline Calling Services (937). Ten on-call clinical Pharmacists and expert trained pharmacists were receiving calls from public and professional asking about drug information, through manual documentation system of drug information inquiries by data collecting form. Using international Study Model (Kinky et al, Ann Pharmacother 1999), the cost considered were the expected results of drug related problems sequel of drug information inquires if not existing drug information services and were not answered; starting from Physician visit, additional treatment, hospital admission to death stage. **RESULTS:** The total number answered calls were 976 calls, with 264 (27%) answered calls were documented; the average costs avoidance per each answered call was (415.78 USD), and total cost was (109,768 USD) with partial documentation, the estimated total cost with complete documentation was (405,801 USD) per year. The cost avoidance of answering public inquiries was (80,806.5 USD) and Professional inquires was (28,961.5 USD). The highest cost avoidance based on type of inquires was dose standardization (34,195 USD), drug administration (21,324 USD) followed by drugs in pregnancy (15,826 USD) and Adverse a Drug reaction (12,793 USD). The highest cost avoidance was Antibacterial expected related problem (33,454.5 USD) **CONCLUSIONS:** In this National Drug Information Center cost-efficiency simulation for Saudi Arabia, hotline line calling services - Drug Information associated with cost savings per each receiving call. expanding the answering drug information services with electronic documentation, and available e-library resources considering the associated preventing drug related problems and Healthcare Improvement and better care, better patient outcomes, and reduced costs.

PIH17

ECONOMIC IMPACT OF TREATING CHINESE POSTMENOPAUSAL WOMEN WITH 17-ß-ESTRADIOL COMBINED HORMONE REPLACMENT THERAPY (HRT) COMPARED WITH THE ALTERNATIVE PRACTICES

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OBJECTIVES: In China there is a lack of awareness of HRT as a treatment option to alleviate climacteric symptoms apart from herbal or traditional Chinese medicines (CM). This study aims to assess economic impact of reimbursing 17-ß-estradiol combined HRT from Chinese payer's perspective. **METHODS:** An economic analysis based on Danish Osteoporosis Prevention Study (DOPS) efficacy data was conducted to model an assumptive cohort of 100,000 women in 2 comparisons, namely HRT based on 2mg 17-ß-estradiol and 10 mg Dydrogesterone versus mixed-treatment cohort, (including 41% no treatment after clinical consultations and 59% treated using CM), and a second comparison of HRT versus 100% CM (50,000 for each group). Long-term fracture, cardiovascular (CV) events and drug procurement costs are evaluated as main outcomes. Cost data are obtained from Shanghai Patient Electronic Medical Records. Daily drug cost is ¥4.39 for HRT based on the only available 17-ß-estradiol included combination drug in China and ¥12 for alternative treatment based on the market research. 5-year continuous treatments with 65% compliance and 10% patients' copayment are reported as base-case scenario. **RESULTS:** The per person costs to achieve fracture free 5 year for HRT, CM-59%, and CM-100% cohorts was ¥831, ¥1,370, and ¥2,276, respectively. The cost per CV event free 5 year for HRT, CM-59%, and CM-100% cohorts was ¥814, ¥1,363, and ¥2,275, respectively. The cost savings achieved with HRT compared to CM-59%, and CM-100% cohorts was ¥544 and ¥1453, respectively. Comparing the costs for 50,000 women using HRT with CM-59%, and CM-100%, a savings of ¥143 million and ¥369 million, respectively was achieved. **CONCLUSIONS:** Although the willingness for Chinese menopausal women to seek treatment is quite low, treating all those who have sought clinical consultations with HRT rather than maintaining use of CM may save healthcare expenditure.

PIH18

A COST-EFFECTIVENESS EVALUATION COMPARING BIOSIMILAR BEMFOLA TO GONAL-F FOR THE TREATMENT OF INFERTILITY IN AN ITALIAN CONTEST

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OBJECTIVES: Bemfola, biosimilar follitropin alfa, has been launched in the Italian Market as a treatment for infertility. The aim of this project is to perform a cost-effectiveness evaluation comparing Bemfola to Gonal-f in an Italian contest. **METHODS:** Starting from "A multi-centre phase 3 study comparing efficacy and safety of Bemfola® versus Gonal-f in women undergoing ovarian stimulation for IVF" by Rettenbacher et al., a cost-effectiveness model was developed to compare costs and efficacies of the two comparators (Bemfola and Gonal-f) in an Italian contest. Clinical data on number of subjects, total dose of gonadotropins, pregnancies and liveborn children, OHSS for both first and second cycle of the study by Rettenbacher et al. were used to feed the model. Costs related to drugs, DRG for ART, specialistic visits and examinations were retrieved from 2015 Italian tariffs. The perspective is the NHS one. Costs of Bemfola and Gonal-f arms were divided by the efficacies, i.e. live birth rate, in order to obtain an average cost per live birth and ICER was also calculated. **RESULTS:** Gonal-f cost resulted to be €3,550 whereas Bemfola cost resulted to be €3,483. Efficacy, i.e. live birth rate, associated to Gonal-f was 0.52 whereas it was 0.47 for Bemfola. The average cost per live birth was estimated to be €6,787 for Gonal-f and €7,449 for Bemfola. Furthermore, Gonal-f generated an ICER equal to €1,210 compared to Bemfola, which is the additional cost required for Gonal-f to gain an additional live birth in comparison with Bemfola. Gonal-f, although it has a higher acquisition cost in comparison with Bemfola, provides a lower average cost per live birth and an ICER of €1,210. **CONCLUSIONS:** The results of this cost-effectiveness analysis indicate that Gonal-f is a cost-efficient treatment strategy for the Italian health service compared to Bemfola in the treatment of infertility.

PIH19

COST-EFFECTIVENESS OF NEXPLANON® (ETONOGESTREL IMPLANT) COMPARED TO OTHER REIMBURSED CONTRACEPTIVE METHODS IN FRANCE BASED ON REAL LIFE DATA

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OBJECTIVES: To estimate the cost-effectiveness of Nexplanon (etonogestrel implant) compared to other reimbursed contraceptive methods in France. **METHODS:** A 6 year cost effectiveness model was developed to assess the cost per unplanned pregnancy of different reimbursed methods (oral contraceptive pill (COC), hormonal intrauterine device (IUD), copper IUD and Nexplanon® among French women in the perspective of the French health care system. Efficacy inputs, including rate of pregnancies and discontinuation, as well as economic parameters of the model were estimated through an analysis of French claim database named EGB based on 2012 data (FACET study). Outcomes considered for contraceptive failure were birth, extra-uterine pregnancy, miscarriage and abortion. Costs of contraception and failures included device, drugs, exams and medical management (physician visits, procedures and hospitalizations) as reported in the database. A discount rate of 4% was applied to both efficacy and

costs. **RESULTS:** Nexplanon was dominant in the base case and in the majority of sensitivity analyses. Nexplanon® allows to avoid 1.6 ‰ pregnancy per year over hormonal IUD, 7.3 ‰ over copper IUD and more than 24.7 ‰ over COC with savings of 115€ over hormonal IUD, 58€ over copper IUD and more than 868€ over COC. At a threshold of 10,000€ per unintended pregnancy avoided, Monte Carlo simulations demonstrated an 82.0% probability for Nexplanon® to be the most cost-effective method. An alternative analysis was proposed evaluating the cost per abortion avoided. In this analysis, the ICER of Nexplanon® versus copper IUD was 8,896€ per abortion avoided while all other methods were strictly dominated. **CONCLUSIONS:** Nexplanon® is the most cost-effective strategy when compared to other reimbursed contraceptive methods. Additionally, this analysis demonstrates that Long-Acting Reversible Contraception (LARC) is dramatically more efficient than oral contraception.

PIH20

POPULATION COST-EFFECTIVENESS OF A PARENTING PROGRAM FOR THE TREATMENT OF CONDUCT DISORDERS: A MODELLING STUDY TO ASSIST PRIORITY SETTING IN AUSTRALIA

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OBJECTIVES: Conduct disorders (CD) are common psychiatric disorders in children, and place a high burden on the individuals and society. Parenting programs are the gold standard for the treatment of CD but little is known about their possible longer-term cost-effectiveness. The study evaluated the population cost-effectiveness of Triple P, the most widely researched parenting program, for the treatment of CD in children, from the health sector perspective. This study is part of a series of economic evaluations undertaken at the Centre for Research Excellence in Mental Health Systems Improvement in Australia. **METHODS:** A population-based Markov model was developed to estimate the cost per disability adjusted life year (DALY) averted of Triple P compared with no intervention. The target population was a cohort of 5-9 year old children with CD in the 2013 Australian population followed through the age of 18 years. Multivariate probabilistic and univariate sensitivity analysis were conducted to incorporate uncertainty in the model parameters and investigate the impact of assumptions in the outcomes. **RESULTS:** Triple P was evaluated in three formats: Group face-to-face, Self-directed (SD)+telephone assisted, and a mixed provision alternative of 50% Group+50% SD+telephone. Group face-to-face had an incremental cost-effectiveness ratio (ICER) of AU$19 069 per DALY averted with a 0.998 probability of cost-effectiveness; SD+telephone had an ICER of AU$31 920 per DALY averted with a 0.931 probability of cost-effectiveness; and the mixed provision alternative had an ICER of AU$25 494 per DALY averted with a 0.986 probability of cost-effectiveness. **CONCLUSIONS:** Triple P for the treatment of CD is good value for money and should be considered as part of the priority setting process in Australia. Group face-to-face Triple P is the most cost-effective option. The model will be used for economic evaluations of other interventions targeting CD.

PIH21

BIOSSIMILARS, ARE THEY REALLY COST SAVING? THE CASE OF RECOMBINANT HUMAN FOLLICLE STIMULATING HORMONE IN PORTUGAL

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OBJECTIVES: To estimate the cost-effectiveness of the original r-hFSH (Gonal-f) when compared with one biosimilar (Bemfola) using the evidence from a head-to-head registration trial. **METHODS:** An Excel-based decision-tree model was developed depicting the different relevant outcomes that result from fertility treatment with r-hFSH. Probabilities were populated using the data from a head-to-head trial used by the biosimilar for its registration at EMA, using as relevant outcome the take-away baby rates found in the trial. Costs were populated from Portuguese official sources and include the cost of the two drugs, as well as the costs related with treatment, such as costs for IVF, ICSI, child delivery and abortion. The analysis was performed from a societal perspective including only direct medical costs with no discounting since all costs occur in a single year. **RESULTS:** According to the model, treatment of 1.000 women with Gonal-f will result in a total number of 447 pregnancies, with 407 women achieving a new-born child. Total cost for this will be 3.062.802,80 €, for a cost per woman achieving a new-born child of 7.534,49 €. Respective values for the biossimilar are 361 pregnancies and 321 women with new-born children. Total cost for this alternative is 2.957.530,12 €, resulting in a cost per new-born child of 9.205,31 €. Incremental cost-effectiveness ratio obtained for Gonal-f vs Bemfola is 1.235,32 € per woman with a new-born child. Sensitivity analysis did not change the hierarchy in the results except on extreme values. For cost-effectiveness ratios to be similar the biosimilar would need a 91% price reduction. **CONCLUSIONS:** The biossimilar is extendedly dominated by Gonal-f, with its cost-effectiveness ratio being higher than the one found for Gonal-f. Under the current scenario the use of the biossimilar is not a cost-effective alternative to the use of Gonal-f and thus should be avoided.

PIH23

COST-EFFECTIVENESS OF CONJUGATED ESTROGENS/BAZEDOXIFENE FOR THE TREATMENT OF VASOMOTOR SYMPTOMS IN THE UNITED STATES

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OBJECTIVES: To estimate the cost-effectiveness of conjugated estrogens/bazedoxifene (CE/BZA) compared with conjugated estrogens/medroxyprogesterone (CE/MPA) or no treatment in a cohort of postmenopausal U.S. women exhibiting vasomotor symptoms (VMS), with an intact uterus and at least 12 months since their last menses. **METHODS:** A Markov cohort model was developed to compare CE/BZA with CE/MPA or no treatment in terms of costs and Quality Adjusted Life Years (QALYs). The model considered VMS, vaginal bleeding, and eight long-term events (LTEs): Hip fracture, vertebral fracture, breast cancer, colorectal cancer, ovarian cancer, coronary heart disease, stroke and venous thromboembolic events. Health states were mutually exclusive. Women were followed through a VMS phase and an additional post-VMS phase in order to assess the treatment effects on the LTEs, representing a life-time horizon. Women were assumed to experience VMS and receive treatment for 4 years, additionally, onset of vaginal bleeding or any LTE resulted in treatment discontinuation. The model utilized data for treatment effects (estimated via network meta-analyses), risks, mortality, quality of life (QoL – using EQ5D estimates) and costs, which were identified from a literature review. The main outcome was cost per QALY. **RESULTS:** Results showed that CE/BZA lead to a gain in QALYs but was associated with higher total costs, resulting in a cost per QALY of $12,949 and $26,066 when compared with CE/MPA and no treatment, respectively. Driven by fewer bleeding events, women on CE/BZA received treatment for a longer duration than women receiving CE/MPA. The LTEs impacted results modestly. Uncertainty analyses indicated that results were robust to changes in key assumptions and input data, however results were most sensitive to changes in QoL associated with VMS and vaginal bleeding. **CONCLUSIONS:** CE/BZA is considered cost-effective for the treatment of VMS in postmenopausal women when compared with either CE/MPA or no treatment in the United States.

PIH24

THE COMPARATIVE PHARMACOECONOMIC ANALYSIS OF USING KORIFOLLITROPIN ALFA WITH GANIRELIX AND FOLLITROPIN ALFA WITH CETRORELIX FOR OVARIAN STIMULATION

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OBJECTIVES: Corifollitropin alfa, a fusion protein, has a longer elimination half-life and extended time to peak levels than recombinant FSH (rFSH). The main aim of this study was to perform comparative pharmacoeconomic analysis of using korifollitropin alfa with ganirelix and follitropin alfa with cetrorelix for ovarian stimulation. **METHODS:** Analysis of the published clinical trials was conducted to evaluate comparative efficacy and safety of the studied therapy options. Direct medical costs included drug therapy and hospital treatment. Taking into account the hypothesis of equal effectiveness of using korifollitropin alfa with ganirelix and follitropin alfa with cetrorelix for ovarian stimulation for pharmacoeconomic analysis was chosen “cost minimization” analysis (CMA). Direct medical costs were calculated for 1 patient. In this study were performed 2 variants of ovarian stimulation costs, in 1st variant was compared only korifollitropin alfa with ganirelix and follitropin alfa with cetrorelix, in 2ndvariant - korifollitropin alfa plus follitropin beta with ganirelix and follitropin alfa with cetrorelix. **RESULTS:** According to published trials corifollitropin alfa was a novel and effective treatment option for potential normal responder patients undergoing ovarian stimulation with gonadotropin co-treatment resulting in a high ongoing pregnancy rate, equal to that achieved with daily rFSH. The average cost for 1st variant of a course of korifollitropin alfa with ganirelix was 34 285 rubles ($ 640), and follitropin alfa with cetrorelix – 65 352 rubles ($ 1 220). The average cost for 2nd variant of a course of korifollitropin alfa plus follitropin beta with ganirelix was 66 886 rubles ($ 1 249), and follitropin alfa with cetrorelix – 65 352 rubles ($ 1 220). The CMA has shown that annual savings when used for ovarian stimulation 1stvariant without follitropin beta will be 18%. **CONCLUSIONS:** The using for ovarian stimulation korifollitropin alfa with ganirelix was more economically justified treatment option.

PIH25

EXAMINING THE ECONOMIC BURDEN AND HEALTH CARE UTILIZATION OF MENOPAUSAL WOMEN IN THE U.S. MEDICAID POPULATION

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OBJECTIVES: To examine the economic burden and health care utilization of menopausal women in the U.S. Medicaid population. **METHODS:** Female patients diagnosed with menopausal symptoms and/or those prescribed estrogen hormone therapy were identified using the U.S. Medicaid database from 01JUL2008 through 30JUN2010. The first diagnosis or prescription date was designated as the index date. Control patients were identified during the same time period and assigned a random index date. Patients in both cohorts were required to be aged 40-65 years and have continuous, fee-for-service medical and pharmacy benefits, 6 months pre- and post-index date. Controls were matched to cases based on age, state, race and index study year. Health care resource utilization and costs during the 6-month follow-up period were compared between the menopause and control cohorts. Generalized linear models were used to adjust for differences in baseline and demographic characteristics between the cohorts. **RESULTS:** A total of 71,076 patients were included in each cohort. Patients in the menopause cohort were significantly more likely to be diagnosed with depression (23.4% vs. 17.3%, $p<0.001$) and anxiety (11.6% vs. 8.0%, $p<0.001$) compared to those in the control cohort. After adjusting for baseline and demographic characteristics, significantly more patients in the Menopause Cohort had inpatient (10.9% vs. 9.3%, $p<0.001$), outpatient hospital (80.6% vs. 34.7%, $p<0.001$) and physician office visits (89.7% vs. 74.8%, $p<0.001$). Higher health care utilizations translated to higher health care costs for menopausal patients ($7,237 vs. $6,739, $p<0.001$) compared to control patients. **CONCLUSIONS:** Patients diagnosed with menopausal symptoms or treated with hormone therapy incurred significantly higher health care utilization and costs compared to women without menopausal symptoms or treatment.

PIH26

COST-EFFECTIVENESS OF RECOMMENDED MEDICAL INTERVENTION FOR TREATMENT OF DYSMENORRHEA AND ENDOMETRIOSIS IN JAPAN SETTING

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